INTEGRATING ARTIFICIAL INTELLIGENCE APPLICATIONS IN SUPPORTING UNIVERSITY STUDENTS' ENGLISH WRITING SKILLS

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ABSTRAK

Penelitian ini bertujuan untuk mengeksplorasi persepsi dan pengalaman mahasiswa dalam menggunakan aplikasi mobile berbasis AI untuk mendukung keterampilan menulis dalam Bahasa Inggris. Penelitian ini menggunakan pendekatan studi kasus kualitatif dengan instrumen berupa angket terbuka dan wawancara semi-terstruktur kepada mahasiswa semester 8 Program Studi Pendidikan Bahasa Inggris di salah satu universitas di Bogor. Hasil penelitian menunjukkan bahwa mahasiswa secara aktif menggunakan aplikasi seperti Grammarly, QuillBot, dan ChatGPT dalam kegiatan menulis akademik, terutama untuk membantu parafrase, koreksi tata bahasa, dan pengembangan ide. Meskipun mereka merasakan manfaat dari segi efisiensi dan akurasi bahasa, beberapa kekhawatiran juga muncul terkait ketergantungan berlebih, lemahnya pemahaman konteks, dan risiko menurunnya kemampuan berpikir kritis. Studi ini merekomendasikan pendekatan pembelajaran terpadu yang mengombinasikan teknologi AI dengan umpan balik dari dosen untuk hasil pembelajaran yang lebih komprehensif.

Kata kunci *:* aplikasi AI, keterampilan menulis, mahasiswa, persepsi, teknologi pendidikan

ABSTRACT

This study explores university students' perceptions and experiences in using AI-based mobile applications to support their English writing skills. A qualitative case study approach was employed, involving open-ended questionnaires and semi-structured interviews with 8th-semester students from the English Education Department at a university in Bogor. The findings revealed that students actively used applications such as Grammarly, QuillBot, and ChatGPT for paraphrasing, grammar correction, and idea development. While they experienced benefits in terms of efficiency and language accuracy, concerns were raised about overdependence, limited contextual understanding, and the risk of reduced critical thinking. The study recommends a blended learning approach that combines AI tools with human feedback to ensure more comprehensive writing development.

Keywords: AI applications, writing skills, student perception, academic writing, educational technology

INTRODUCTION

The advancement of artificial intelligence (AI) has significantly influenced various sectors, including education. In English as a Foreign Language (EFL) learning, writing is considered one of the most challenging skills due to its demand for grammatical accuracy, coherence, vocabulary control, and idea development (Rasyid and Pratiwi, 2015). In response to these difficulties, digital tools especially AI-based mobile applications have emerged as practical solutions to support students' writing processes.

Several studies have highlighted the role of AI in assisting learners' writing development. For instance, Grammarly offers automated grammar correction and style suggestions, Quill Bot enables paraphrasing with vocabulary enhancement, and ChatGPT provides idea generation and content organization (Ramadhan et al., 2000; Hsu, 2021).

These tools not only provide instant feedback but also promote writing autonomy and self-editing habits. However, some researchers warn about potential risks such as overdependence on technology, lack of critical engagement with content, and ethical concerns related to plagiarism (Latifah et al., 2024).

Unlike previous studies that primarily reviewed the theoretical benefits of AI tools, this research investigates how university students actually use AI-powered writing applications in real academic contexts. It focuses on their experiences, perceived usefulness, and challenges in using these tools.

Therefore, this study aims to explore the real-world use of AI-based mobile applications specifically Grammarly, Quill Bot, and ChatGPT by university-level EFL students. It seeks to answer the following questions: (1) What are students' patterns of using AI tools in writing? (2) What are

the perceived advantages and disadvantages? (3) How do students balance the use of AI with traditional writing instruction?

METHOD

This study employed a qualitative approach using a case study design to explore in depth the perceptions and experiences of university students in utilizing Artificial Intelligence (AI)-based mobile applications to support their English writing skills. The qualitative method was chosen for its strength in uncovering subjective meanings and lived experiences within real academic contexts.

Research Setting and Participants

The research was conducted at a private university in Bogor, Indonesia. Five eighth-semester students from the English Education Program were purposively selected as participants. These students were chosen because they had substantial experience using AI tools such as ChatGPT, Quill Bot, and Grammarly for their academic writing tasks.

Data Collection Instruments and Procedures

Data were collected using two primary instruments:
1. **Open-Ended Questionnaire**: This instrument included nine open-ended questions designed to gather insights into how students use AI tools, how they implement them in their learning processes, and their perceptions of the effectiveness of these tools in enhancing writing performance. Participants were encouraged to respond freely based on their personal experiences.
2. **Semi-Structured Interviews**: To gain deeper insights into students' challenges, benefits, and comparisons between AI-assisted and traditional writing methods, face-to-face semi-structured interviews were conducted. The interviews were conducted in Bahasa Indonesia to ensure that participants could express their thoughts clearly and comfortably. These interviews complemented the questionnaire data and allowed for further elaboration of key points.

Data Analysis

The data were analysed using the interactive model proposed by Miles, Huberman, and Saldana (2014), which consists of three stages:
This process involved selecting, simplifying, organizing, and coding the raw data obtained from questionnaires and interviews. Initially, all responses were translated into English to maintain consistency in analysis. Then, the researcher identified recurring patterns and grouped similar responses under thematic categories such as "benefits of AI," "challenges," and "comparison with traditional methods."

The reduced data were presented in a structured and descriptive format using thematic tables and narrative explanations. Each theme was discussed in detail, and relevant direct quotations from participants were included to provide deeper context and illustrate key findings.

The final stage involved interpreting the data to derive meaningful conclusions. Patterns and relationships among themes were examined to understand the students' overall perceptions of AI-based tools in writing. Triangulation was applied by comparing findings from both data sources (questionnaires and interviews) and by discussing the interpretations with another researcher to ensure validity and minimize bias.

RESULT AND DISCUSSION

This section presents the findings of the study based on data collected through open-ended questionnaires and semi-structured interviews. The analysis focuses on students' perceptions and experiences regarding the use of AI-based mobile applications in developing their English writing skills. The results are organized into four major themes aligned with the research objectives: usage patterns, perceived benefits, encountered challenges, and comparisons with traditional learning methods. Each finding is discussed with reference to relevant theories and prior research to provide a comprehensive understanding.

Usage of AI-Based Mobile Applications in Writing Tasks

The findings revealed that students frequently used AI tools such as ChatGPT, Quill Bot, and Grammarly in their academic writing processes. The tools were mainly used for grammar correction, idea generation, paraphrasing, summarizing, and improving sentence structure. All five participants confirmed that AI tools had become a routine part of their learning, particularly when working on assignments or tasks requiring high language precision.

Students expressed that the ease of access and quick feedback offered by these tools significantly enhanced their productivity. As one participant noted, "AI helps me generate ideas and structure my text faster, especially when I'm under time pressure." This finding is consistent with the Technology Acceptance Model (TAM) by Davis

(1989), which highlights perceived usefulness and ease of use as key determinants of technology adoption. The frequent and autonomous use of AI tools by students indicates high acceptance and positive integration into their writing routines.

Perceived Benefits for Writing Development

Participants reported a range of benefits from using AI tools. These include improved grammar accuracy, enhanced vocabulary, better text organization, and increased confidence in writing. Students mentioned that AI helped them develop writing fluency by offering immediate corrections and suggestions. Many stated that the tools allowed them to revise and refine their work independently, fostering a sense of learning autonomy.

These results support the Writing Process Theory proposed by Flower and Hayes (1981), which describes writing as a recursive cognitive process involving planning, drafting, and revising. AI tools align well with this theory, as they assist in all stages from brainstorming to final editing. Moreover, the psychological comfort of using AI tools without the fear of judgment contributed to reduced writing anxiety and enhanced motivation, especially for students learning English as a foreign language.

This aligns with findings by Hwang et al. (2023), who reported improved writing performance among EFL students using AI-based feedback tools. Similarly, research by Amyatun & Kholis (2023) showed that Quill Bot helped students write more coherent and paraphrased texts in academic assignments.

Challenges in Using AI Tools for Writing

Despite the benefits, students also encountered several limitations when using AI applications. The most common issue was inaccuracy or irrelevance of AI-generated content. Some students noted that AI sometimes provided general, unfocused responses or repetitive outputs that required further revision. Others mentioned difficulties in crafting effective prompts, which impacted the quality of the feedback received.

These challenges relate to concerns raised by González et al. (2023), who argued that AI lacks contextual sensitivity and may misinterpret user intent. Furthermore, participants expressed that excessive dependence on AI made them less engaged in the critical thinking process of writing, echoing the caution by Hsu (2021) regarding cognitive overreliance on AI tools.

The lack of deep, personalized feedback was also seen as a weakness. Unlike human instructors, AI cannot provide nuanced suggestions, explain the rationale behind revisions, or guide students through more abstract writing aspects like tone or argument development. This reinforces arguments from the Computer-Assisted Language Learning (CALL) literature, such as Levy (1997) and Warschauer (2000), which suggest that digital tools should complement not replace human instruction.

Comparison with Traditional Writing Instruction

When comparing AI-based writing assistance with traditional methods such as teacher-led feedback or textbooks, students acknowledged both strengths and limitations of AI. While AI offered speed and independence, traditional instruction was preferred for deeper understanding, richer explanations, and human interaction.

Some students shared that they felt more motivated and confident using AI tools, especially when working independently. However, they still valued the structured feedback and accountability provided by teachers. This indicates that a blended learning approach, combining AI with conventional pedagogical support, may provide the most balanced and effective environment for writing development.

This view is consistent with Warschauer & Meskill (2000) and Jaelani (2020) who emphasized the importance of integrating technology into language education without undermining the role of educators. The findings also support the notion that while AI can accelerate and support writing, meaningful learning still requires human guidance, especially for complex language tasks.

CONCLUSION

This study explored the perceptions of university students regarding the use of AI-based mobile applications in developing their English writing skills. The findings indicate that students frequently use AI tools such as ChatGPT, QuillBot, and Grammarly to support various stages of their writing process, including idea generation, grammar correction, paraphrasing, and structuring texts. These tools are perceived as useful, easy to access, and effective in increasing productivity and writing quality. The results affirm that students find AI helpful in overcoming common writing challenges and enhancing their confidence, particularly when dealing with academic tasks in English. However, the study also revealed significant limitations, such as the risk of overreliance, inaccurate outputs, and the lack of

contextual or personalized feedback, which AI tools cannot fully provide.

These findings imply that while AI can be a powerful complement to writing instruction, it should not replace traditional methods of learning that involve teacher guidance and critical engagement. A blended approach that integrates the efficiency of AI with the depth and nuance of human feedback appears to be the most effective strategy. The study contributes to the growing understanding of AI's role in language education and suggests that educators and institutions should guide students in using such tools responsibly and reflectively. Future research may further explore the long-term effects of AI use on students' independent writing skills, critical thinking, and academic integrity, as well as develop pedagogical frameworks that optimize the integration of AI technology in writing instruction.

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